DOCUMENT RESUME

ED 132 383 08 CE 009 136

TITLE Vocational Education Curriculum Specialist (VECS). Module 14: General Methods and Techniques of Educational Evaluation. Study Guide. (Teaching/Learning Module).
INSTITUTION American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE 76
CONTRACT OEC-0-74-9286
NOTE 57p.; For related documents see CE 009 129-136 and CE 009 192-206

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS *Curriculum Development; Curriculum Evaluation; *Evaluation Methods; Higher Education; Instructional Materials; Instructional Programs; Learning Modules; *Models; Post Secondary Education; *Program Evaluation; Secondary Education; Specialists; Study Guides; Teacher Education; *Vocational Education

ABSTRACT

One of 15 core modules in a 22-module series designed to train vocational education curriculum specialists (VECS), this guide is intended for use by both instructor and student in a variety of education environments, including independent study, team teaching, seminars, and workshops, as well as in more conventional classroom settings. The guide has five major sections. Part I, Organization and Administration, contains an overview and rationale, educational goals and performance objectives, recommended learning materials, and suggested reference materials. Part II, Content and Study Activities, contains the content outline arranged by goals. Study activities for each goal and its corresponding objectives follow each section of the content outline. Content focus is on the purposes and components of the prominent types or models of educational evaluation and their applicability to the evaluation of vocational education programs. Part III, Group and Classroom Activities, suggests classroom or group activities and discussions keyed to specific content in the outline and to specific materials in the list of references Part IV, Student Self-Check, contains questions directly related to the goals and objectives of the module, which may be used as a pretest or posttest. Part V, Appendix, contains suggested responses to the study activities from part II and responses to the student self-checks. (HD)

General Methods and Techniques of Educational Evaluation

STUDY GUIDE

(TEACHING/LEARNING MODULE)

[illegible] Act of 1964 [illegible] on the ground of [illegible] excluded from participation in, [illegible] subjected to discrimination under any [illegible] activity receiving Federal financial assistance." Therefore, [illegible] Education program, like all other programs or [illegible] financial assistance from the Department of [illegible], and Welfare, must be operated in compliance with [illegible]

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-Study Guide-

Module 14

GENERAL METHODS AND TECHNIQUES OF EDUCATIONAL EVALUATION

This document is one of a series of teaching/learning modules designed to train Vocational Education Curriculum Specialists. The titles of all individually available documents in this series appear below:

INTRODUCTORY MODULES

1. The Scope of Vocational Education
2. Roles of Vocational Educators in Curriculum Management
3. Current Trends in Vocational Education
4. Organization of Vocational Education
5. Legislative Mandates for Vocational Education
6. The Preparation of Vocational Educators

CORE MODULES

1. Important Differences Among Learners
2. Learning Processes and Outcomes
3. Applying Knowledge of Learning Processes and Outcomes to Instruction
4. Assessing Manpower Needs and Supply in Vocational Education
5. Laying the Groundwork for Vocational Education Curriculum Design
6. Selecting Instructional Strategies for Vocational Education
7. Derivation and Specification of Instructional Objectives
8. Development of Instructional Materials
9. Testing Instructional Objectives
10. Fiscal Management of Vocational Education Programs
11. Introducing and Maintaining Innovation
12. Managing Vocational Education Programs
13. Basic Concepts in Educational Evaluation
14. General Methods and Techniques of Educational Evaluation
15. Procedures for Conducting Evaluations of Vocational Education

SEMINARS AND FIELD EXPERIENCE MODULE

(Seminars in Authority Roles and the Curriculum Specialist in Vocational Education, and Leadership Styles and Functions of the Curriculum Specialist in Vocational Education; field work in Project Design and Administration, Operation of School Programs, Evaluation of School Programs, Educational Research and Development, and State, Regional, and Federal Program Supervision)

INSTALLATION GUIDE

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PREFACE

Who is a vocational education curriculum specialist? The answer to this question is not as simple as it might appear. A vocational education curriculum specialist is likely to work in many different capacities, including, but not limited to: instructor, department chairperson, dean of vocational-technical education, vocational supervisor, principal, state or local director of vocational education, and curriculum coordinator.

The specialist is, perhaps, more identifiable by his/her responsibilities, which include, but are not limited to:

- planning, organizing, actualizing, and controlling the work of an educational team performed to determine and achieve objectives.
- planning, organizing, and evaluating content and learning processes into sequential activities that facilitate the achievement of objectives.
- diagnosing present and projected training needs of business, industry, educational institutions, and the learner.
- knowing, comparing, and analyzing different theories of curriculum development, management, and evaluation and adapting them for use in vocational-technical education.

This teaching/learning module is part of a set of materials representing a comprehensive curriculum development project dealing with the training of vocational education curriculum specialists. The purpose of this two-year project was 1) to design, develop, and evaluate an advanced-level training program, with necessary instructional materials based on identified vocational education curriculum specialist competencies, and 2) to create an installation guide to assist instructors and administrators in the implementation process.

The curriculum presented here is, above all else, designed for flexible installation. These materials are not meant to be used only in the manner of an ordinary textbook. The materials can be used effectively by both instructor and student in a variety of educational environments, including independent study, team teaching, seminars, and workshops, as well as in more conventional classroom settings.

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Principal Investigator and
presently Director,
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ACKNOWLEDGEMENTS

The Vocational Education Curriculum Specialist Project was a comprehensive development and evaluation effort involving the contribution of a large number of people: project staff, curriculum consultants, a national advisory panel, and a number of cooperating colleges and universities. This wide variety of valuable inputs makes it difficult to accurately credit ideas, techniques, suggestions, and contributions to their originators.

The members of the National Advisory Panel, listed below, were most helpful in their advice, suggestions, and criticisms.

Myron Blee	*Florida State Department of Education*
James L. Blue	*ECU Director, Olympia, Washington*
Ralph C. Bohn	*Kansas State University*
Ken Edwards	*International Brotherhood of Electrical Workers*
Mary Ellis	*President, American Vocational Association*
George McCabe	*Program Director, Consortium of California State University and Colleges*
Curtis Henson	*Atlanta Independent School District, Georgia*
Ben Hirst	*Director, Consortium of the States, Atlanta, Georgia*
Joseph Julianelle	*U. S. Department of Labor*
Lee Knack	*Industrial Relations Director, Morrison-Knudsen, Inc.*
Bette LaChapelle	*Wayne State University*
Jerome Moss, Jr.	*University of Minnesota*
Frank Pratzner	*CVE, Ohio State University*
Rita Richey	*Wayne State University*
Bryl R. Shoemaker	*Ohio State Department of Education*
William Stevenson	*Oklahoma State Department of Education*

The project would not have been possible without the cooperation and commitment of the field test institutions listed below.

California State University, Long Beach
California Polytechnic State University, San Luis Obispo
Consortium of California State University and Colleges
- California State University, Sacramento
- California State University, San Diego
- California State University, San Francisco
- California State University, San Jose
- California State University, Los Angeles

Iowa State University
University of California Los Angeles
University of Northern Colorado

Overall responsibility for the direction and quality of the project rested with James A. Dunn, Principal Investigator. Project management, supervision, and coordination were under the direction of John E. Bowers, Project Director.

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Part II:

Organization and Administration

PART I
ORGANIZATION AND ADMINISTRATION

Guidelines

This study guide has five major sections. Each section contains useful information, suggestions, and/or activities that assist in the achievement of the competencies of a Vocational Education Curriculum Specialist. Each major section is briefly described below.

PART I: ORGANIZATION AND ADMINISTRATION

PART I contains an Overview and Rationale, Educational Goals and Performance Objectives, Recommended Learning Materials, and Suggested Reference Materials. This section will help the user answer the following questions:

- How is the module organized?
- What is the educational purpose of the module?
- What specifically should the user learn from this module?
- What are the specific competencies emphasized in this module?
- What learning materials are necessary?
- What related reference materials would be helpful?

PART II: CONTENT AND STUDY ACTIVITIES

Part II contains the content outline arranged by goals. The outline is a synthesis of information from many sources related to the major topics (goals and objectives) of the module. Study activities for each goal and its corresponding objectives follow each section of the content outline, [illegible]g students to complete the exercises related to Goal 1 before going on to Goal 2.

PART III: GROUP AND CLASSROOM ACTIVITIES

The "Activities-Resources" column in the content outline contains references to classroom or group activities and discussion questions related to specific content in the outline. These activities and discussion questions

are located in PART III and are for optional use of either the instructor or the student. Both the classroom activities and discussion questions are accompanied by suggested responses for use as helpful examples only--they do not represent conclusive answers to the problems and issues addressed. Also contained in the "Activities-Resources" column are the reference numbers of the resources used to develop the content outline. These reference numbers correspond to the numbers of the Suggested Reference Materials in PART I.

PART IV: STUDENT SELF-CHECK

PART IV contains questions directly related to the goals and objectives of the module. The self-check may be used as a pre-test or as a post-test, or as a periodic self-check for students in determining their own progress throughout the module.

PART V: APPENDICES

Appendix A contains responses to the Study Activities from PART II, and Appendix B contains responses to the Student Self-Check. The responses provide immediate feedback to the user and allow the module to be used more effectively for individualized study. They have been included in the last part of the module as appendices to facilitate their removal should the user wish to use them at a later time rather than concurrently with the rest of the module.

Approximately 30 hours of out-of-class study will be necessary to complete this module.

Overview and Rationale

Today's educational evaluator has a variety of evaluation theories that have been operationalized in the form of evaluation models from which to choose. In this module, the more prominent types of educational evaluation models are examined in order to provide the student with a working knowledge of the skills and techniques that may be required of an educational evaluator.

This module is divided into five major content areas. The first area delineates the purposes of evaluation as they are most commonly conceived. Each of the last four content areas is an examination of one of the four "types" of educational evaluation. Whenever possible, seminal papers upon which particular evaluation types have been based are included as part of the learning activities. Suggested classroom discussions concern the applicability of each evaluation type to vocational education, and specific examples from vocational education are found in the learning exercises.

All readings suggested in this module should be studied with respect to the purposes of evaluation, the roles of the evaluator, and the steps to be taken in conducting an educational evaluation. Four general models of educational evaluation are presented. These four models were introduced in Module 13: Basic Concepts in Educational Evaluation and are labelled goal-attainment evaluation, judgmental evaluation emphasizing intrinsic criteria, judgmental evaluation emphasizing extrinsic criteria, and decision-facilitation evaluation.

Goal-attainment evaluation focuses essentially on the extent to which program goals are translated into behavioral objectives and achieved by program participants.

Judgmental evaluations in general are based on assessments of program components by the evaluator or expert.

Judgmental evaluation emphasizing intrinsic criteria addresses the practice of accreditation or certification of educational programs with respect to facilities, size of the library, pupil-teacher ratios, degrees earned by program staff, and other standards related to program components.

Judgmental evaluation emphasizing criteria extrinsic to the program attends to criteria relating to the description and judgment of factors

outside the program. Judgments may be made about program goals, operations, and results. Distinctions are drawn between the role of evaluation in program development - early implementation (formative) and the judgment of the effectiveness of the total program (summative).

Decision-facilitation evaluation further defines the evaluator's role with respect to the stages of program development, from planning through implementation to final outcomes. At each stage of the formative-summative continuum, the role of the evaluator is to provide information to program developers, managers, implementators, sponsors, and other decision-makers.

Goal and Objectives

Upon completion of this module, the student will be able to achieve the following goal and objectives:

GOAL 14.1: BE AWARE OF THE PURPOSES AND COMPONENTS OF THE PROMINENT TYPES OR MODELS OF EDUCATIONAL EVALUATION AND BE AWARE OF THEIR APPLICABILITY TO THE EVALUATION OF VOCATIONAL EDUCATION PROGRAMS.

Objective 14.11 State the overall purpose of each of the four major evaluation types.

Objective 14.12 Define the role of the evaluator in each model or type of evaluation.

Objective 14.13 List the operational steps required in conducting an educational evaluation.

Objective 14.14 Develop and list criteria for vocational education evaluation for each of the major evaluation types.

Objective 14.15 Distinguish among activities that are characteristic of goal-attainment evaluation, judgmental evaluation emphasizing intrinsic criteria, judgmental evaluation emphasizing extrinsic criteria, and decision-facilitation evaluation.

Recommended Materials

1. Anderson, Scarvia B., et al, "Evaluation Concepts" in Encyclopedia of Educational Evaluation. San Francisco: Jossey-Bass, Inc., 1973.

2. Cronbach, Lee, "Course Improvement through Evaluation." Teachers College Record, 64 (1963): 672-683.

3. Tyler, Ralph W. "General Statement on Evaluation." Journal of Educational Research, 35 (1942): 492-501.

4. Popham, W. James. Excerpt from Chapter 2, "Contemporary Conceptions of Educational Evaluation" in Educational Evaluation. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975, pp. 24-25.

5. Stake, Robert E. "The Countenance of Educational Evaluation." Teachers College Record, 68 (1967): 523-540.

6. Alkin, Marvin C., and Fitz-Gibbon, Carol T. "Methods and Theories of Evaluating Programs." Journal of Research and Development in Education, 8 (1975): 2-15.

NOTE: The above materials are necessary if students are to complete adequately the study activities following the content outline.

Suggested References

1. Alkin, Marvin C. et al. Evaluation and Decision Making: The Title VII Experience. Los Angeles: University of California, Center for the Study of Evaluation, 1974.

2. _____ and Fitz-Gibbon, Carol T. "Methods and Theories of Evaluating Programs." Journal of Research and Development in Education, 8 (Spring 1975): 2-15.

3. Cremin, Lawrence; The Transformation of the School. New York: Vintage Books, 1961.

4. Ghazalah, I.A. "The Role of Vocational Education in Improving Skills and Earning Capacity in the State of Ohio: A Cost-Benefit Study." Athens, Ohio: College of Business Administration, Ohio University, November 1972.

5. Hammond, Robert L. "Evaluation at the Local Level." In Educational Evaluation: Theory and Practice, by Blaine R. Worthen and James R. Sanders. Worthington, Ohio: Charles A. Jones Publishing Co., 1973, pp. 157-169.

6. Klein, Stephen et al. "The Center's Changing Evaluation Model." Evaluation Comment, 2 (1971): 9-12.

7. Metfessel, Newton S., and Michael, William B. "A Paradigm Involving Multiple Criterion Measures for the Evaluation of the Effectiveness of School Programs." Educational and Psychological Measurement, 27 (1967): 931-943.

8. Moss, Jerome Jr., and Stromsdorfer, Ernest W. "Evaluating Vocational and Technical Education Programs." In Vocational Education. Today and Tomorrow, edited by Gerald G. Somers and J. Kenneth Little. Madison, Wisconsin: The University of Wisconsin, 1971.

9. National Society for the Study of Education. The Curriculum: Retrospect and Prospect. The Seventieth Yearbook, Part I. Chicago: University of Chicago Press, 1971.

10. National Society for the Study of Education. Educational Evaluation: New Roles, New Means. The Sixty-eighth Yearbook, Part II. Chicago: University of Chicago Press, 1969.

11. National Study of Secondary School Evaluation. Evaluative Criteria. Washington, D.C.: National Study of Secondary School Evaluation, 1960.

12. Popham, W. James. Educational Evaluation. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.

13. _____. An Evaluation Guidebook. Los Angeles: The Instructional Objectives Exchange, 1972.

14. Provus, Malcom. Discrepancy Evaluation. Berkeley, California: McCutchan Publishing Company, 1971.

15. Scriven, Michael. "The Methodology of Evaluation." In Perspectives of Curriculum Evaluation. Chicago: Rand McNally, 1967.

16. _____. "Pros and Cons about Goal-Free Evaluation." Evaluation Comment, 3 (December 1972): 1-4.

17. Stufflebeam, Daniel L. et al. Educational Evaluation and Decision Making. Phi Delta Kappa National Study Committee on Evaluation. Itasca, Illinois: F.E. Peacock Publishers, Inc., 1971.

18. _____. "Evaluation as Enlightenment for Decision-Making." In Improving Educational Assessment and an Inventory of Measures of Affective Behavior, edited by W. H. Beatty. Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1969, pp. 41-73.

19. Tyler, Ralph. Basic Principles of Curriculum and Instruction. Chicago: University of Chicago Press, 1949.

20. Wenrich, Ralph C., and Wenrich, J. William. Leadership in Administration of Vocational and Technical Education. Columbus, Ohio: Charles E. Merrill Publishing Company, 1974.

21. Worthen, Blaine R., and Sanders, James R. Educational Evaluation: Theory and Practice. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.

Part II:

Content and Study Activities

PART II
CONTENT AND STUDY ACTIVITIES

Goal 14.1

Content Outline	Activities-Resources

Goal 14.1: Be Aware of the Purposes and Components of the Prominent Types or Models of Educational Evaluation and Be Aware of Their Applicability to the Evaluation of Vocational Education Programs.

A. Purposes of Evaluation

1. Evaluation in education has been and is used for many purposes. Among these are:
   a. classification of students;
   b. justification of expenditures;
   c. confirmation or rejection of hypotheses regarding teaching methods, instructional materials, etc.;
   d. public relations;
   e. accountability;
   f. provision of guidance information;
   g. course improvement; and
   h. improvement of teachers, administrators, and other personnel (10), (12). *

2. Evaluation for Course Improvement
   a. Prior to Ralph Tyler's writing in the early 1940s, theorists and writers in the educational testing movement spoke only vaguely

(10) Educational Evaluation: New Roles, New Means, pp. 10-11.

(12) Educational Evaluation, Chap. 2, pp. 20-44.

* See the Glossary of Terms at the beginning of Part III.

about how what was then considered evaluation could be used to improve education and to demonstrate the merit of existing programs (3).

b. Lee J. Cronbach, in his essay, "Course Improvement through Evaluation," took issue with the prevailing purposes of evaluation and asserted that the improvement of curriculum could not be brought about by using the technology of the day.

(3) The Transformation of the School, pp. 252-253.

B. Goal-Attainment Evaluation

1. Models based on goal attainment conceive of evaluation primarily as the determination of the degree to which a program's or project's goals are achieved.
2. Ralph Tyler's model was first formally used in the Eight-Year Study and explained in a 1942 paper. Widely disseminated in Basic Principles of Curriculum and Instruction, the model has four steps.
   a. Formulate educational goals according to an analysis of three goal sources (students, society, and subject matter) and two goal screens (psychology and philosophy).
   b. Transform goals into behavioral objectives.
   c. Conduct program.
   d. Measure student progress to assess the degree to which objectives were met (3), (19).
3. Robert L. Hammond also conceives of evaluation in terms of whether or not objectives are met.

(19) Basic Principles of Curriculum and Instruction.

To determine this, he identifies five steps that should be taken.

a. Isolate aspects of the program to be evaluated.
b. Define the relevant institutional and instructional variables.
c. Specify objectives in behavioral terms.
d. Assess the behavior described in the objectives.
e. Analyze goal attainment results (5).

4. Metfessel and Michael expand the goal-attainment model by attempting to establish different classes of criterion measures that can by used to reflect goal attainment. There are eight steps in the Metfessel-Michael approach to evaluation.

a. Involve members of the total community.
b. Construct broad goals but specific objectives.
c. Translate objectives into communicable and usable form.
d. Develop measurement instruments to assess accomplishment of objectives.
e. Conduct periodic measurements.
f. Analyze data from measurements.
g. Interpret analyzed data.
h. Formulate recommendations for change or modification (7).* *

(5) "Evaluation at the Local Level," pp. 157-169.

(7) "A Paradigm Involving Multiple Criterion Measures for the Evaluation of the Effectiveness of School Programs," pp. 931-943.

* See the goal-attainment exercise (a) of Classroom Activity 1 in Part III.

* See Discussion Questions A and B in Part III.

C. Judgmental Evaluation Based on Instrinsic Criteria

1. The United States has no federal ministry of education or other centralized authority exercising a single, national control over educational institutions.

   To ensure a basic level of quality, the practice of accreditation arose in the United States as a means of conducting nongovernmental, peer evaluation of educational institutions and programs. Private educational associations of regional or national scope have adopted criteria reflecting the qualities of sound educational programs, and developed procedures for evaluating institutions or programs to determine whether or not they are operating at these basic levels of quality.

2. Functions of accreditation are:
   a. certifying that an institution has met established standards;
   b. assisting prospective students to identify acceptable institutions;
   c. assisting institutions in determining the acceptability of transfer credits.
   d. helping to identify acceptable institutions and programs for the investment of public and private funds;
   e. protecting an institution against harmful internal and external pressures;
   f. creating goals for the self-improvement of weaker programs and stimulating a general

raising of standards among educational institutions;

g. involving the faculty and staff comprehensively in institutional evaluation and planning;

h. establishing criteria for professional certification and licensing, and for upgrading courses offering such preparation; and

i. providing one basis for determining eligibility for federal assistance (11).

(11) Evaluative Criteria.

3. The procedure for accrediting institutions involves the following steps:

a. Standards: The accrediting agency (which is composed of members from the institutions it accredits), in collaboration with educational institutions, establishes standards.

b. Self-study: The institution or program seeking accreditation prepares a self-evaluation study that measures its performance against the standards established by the accrediting agency.

c. Onsite Evaluation: A team selected by the accrediting agency visits the institution or program to determine firsthand if the applicant meets the established standards.

d. Publication: When it is satisfied that the applicant meets its standards, the accrediting agency lists the institution or program in an official publication with other similarly accredited institutions or programs.

e. Reevaluation: The accrediting agency periodically reevaluates the institutions or programs that it lists to ascertain that continuation of the accredited status is warranted.

4. Evaluation based on intrinsic criteria is generally conceived by theorists as evaluation by checklist and professional judgment. Evaluation may be by criteria such as:
   a. type of equipment in shops;
   b. facilities;
   c. number and type of books in the library;
   d. qualifications of faculty;
   e. financial support (12).*

(12) Educational Evaluation, pp. 24-25.

* See Discussion Questions C, D and E in Part III. Also see the judgmental evaluation based on intrinsic criteria exercise (b) of Classroom Activity 1.

D. Judgmental Evaluation Based on Extrinsic Criteria

1. The two most prominent extrinsic criteria evaluation models have been proposed by Michael Scriven and Robert Stake. Scriven first drew evaluators' attention to the formative-summative distinction.
   a. Scriven conceives of evaluation (including evaluation of the goals themselves) as ultimately an assessment of merit (15).
   b. Scriven calls his approach, which focuses on extrinsic criteria, "pay-off" evaluation The effects of the program on the students, teachers, administrators, and other relavant groups.
   c. He advocates comparative evaluation because decision-making often involves choices among competing options, thereby requiring a comparison of the competitors.

(15) "The Methodology of Evaluation," pp. 39-83.

d. He also proposes goal-free evaluation to remove any bias created by knowing the goals while trying to determine their effects (16).

(16) "Pros and Cons about Goal-Free Evaluations," pp. 1-4.

2. Stake's Countenance Model emphasizes description and judgment as the two chief operations of evaluation.
   a. He advocates that evaluators help to write behavioral objectives.
   b. He indicates that descriptive and judgmental acts are distinguished according to three phases of an educational program:
      (1) antecedent--or conditions existing prior to instruction;
      (2) transaction--a succession of engagements that constitute the instructional process; and
      (3) outcomes--or the effects of a program.
   c. Descriptive acts are divided according to what was intended and what was actually observed.
   d. Judgmental acts are divided according to whether they refer to the standards or criteria used in reaching judgments or to the actual judgments themselves.
   e. The Countenance Model continuously involves the evaluator in description and judgment--from the beginning to the end of the program.
   f. Absolute vs. relative (comparative vs. opinion or personal judgment) criteria are used in judging.*

* See Discussion Questions F and G and also the judgmental evaluation based on extrinsic criteria exercise (c) of Classroom Activity 1 in Part III.

E. Decision-Facilitation Evaluations

1. The objective of these models is to provide educational decision-makers with the information they need to improve programs. Daniel Stufflebeam and the CIPP Model view evaluation as a continuing and cyclical process (17) (18) (12).
   a. Four types of decisions are served by evaluation:
      (1) Context--Evaluation provides a rationale for the determination of objectives.
      (2) Input--Evaluation provides information on how to employ resources so as to achieve program objectives.
      (3) Process--Evaluation identifies defects in procedural design.
      (4) Product--Evaluation measures and interprets the results of an instructional program.
   b. Three steps are involved in each of the evaluations:
      (1) Delineating information--The focus is put on information required by the decision-makers.
      (2) Obtaining--The data in (1) above is collected and analyzed.
      (3) Providing--The material of (2) above is put into a form useful to the decision-maker.
2. Malcom Provus' decision-facilitation evaluation model involves the comparison of performance

(17) Educational Evaluation and Decision Making.
(18) "Evaluation as Enlightenment for Decision-Making."
(12) Educational Evaluation, pp. 33-37.

with standards in order to determine whether to improve, maintain, or terminate a program. There are five stages to the Discrepancy Model (14) (10):

a. Design--documents the nature of the program including objectives, resources required, and instructional activities needed.

b. Installation--sees whether or not the program is congruent with its installation plans. Choices then are to terminate, proceed, alter performance, or alter standards.

c. Process--is similar to Scriven's formative evaluation, the CIPP process evaluation, and the CSE progress evaluation (15) (17) (2) (6).

d. Product--is similar to the product and outcome stages of the CIPP and CSE models respectively.

e. Program Comparison--analyzes the cost-benefit of other competing programs.*

3. The CSE (Center for the Study of Evaluation-UCLA) decision-facilitation model is composed of three stages and six substages (1) (2) (6) (12):

a. Pre-Formative Evaluation Stage

(1) Needs Assessment--pinpoint educational needs with the purpose of identifying educational goals.

(2) Program Planning--provides information regarding the types of programs that would meet the needs identified in a (1).

(14) Discrepancy Evaluation.

(10) Educational Evaluation: New Roles, New Means, pp. 242-283.

(15) "The Methodology of Evaluation."

(17) Educational Evaluation and Decision-Making.

(2) "Methods and Theories of Evaluating Programs."

(6) "The Center's Changing Evaluation Model."

* See Discussion Question H in Part III.

(1) Evaluation and Decision Making, Chap. 1.

(12) Educational Evaluation, pp. 37-39.

b. Formative Evaluation Stage

(1) Implementation--provides information on the degree to which the program is being implemented as planned. The focus is on modification (2).

(2) Progress--provides information on student progress with a focus on learning the results of implementation.

c. Summative Evaluation Stage

(1) Documentation--provides information on the results of the program.

(2) Outcome--provides information or recommendations on whether to continue or discontinue the program.*

(2) "Methods and Theories of Evaluating Programs."

* See the decision-facilitation evaluation exercise (d) of Classroom Activity 1. Also see Discussion Questions I, J and K.

F. Study Activities

Based on your reading of the content outline and any additional references as suggested, complete the following activities.

1. Is Cronbach's definition of evaluation compatible with the one given in Module 13? With that conceptualized by Anderson in the first reading?

2. List the three types of decisions for which Cronbach feels evaluation can be used.

3. Why did Cronbach emphasize evaluation for course improvement over the other two decision situations?

4. Although Scriven hadn't made the formative/summative distinction at the time of Cronbach's essay, Cronbach treated the point. At what point in a program did Cronbach advocate evaluation? Why?

5. What role should comparison evaluation play according to Cronbach?

6. How much effect did Cronbach believe follow-up studies had on course improvement? Why?

7. Tyler states that evaluation in the schools chiefly serves the purpose of grading students, selecting students, and reporting to parents and school boards. He argues that comprehensive evaluation should be more than this. List the other purposes Tyler felt evaluation should serve.

8. What current (but often hotly debated) educational phenomenon is the result of Tyler's first assumption underlying the evaluation of the outcomes of general education?

9. What does Tyler propose as the basis of educational objectives?

10. Tyler recommends a definite procedure for the conduct of educational evaluation. All the steps of the process (except the last) appear to be oriented toward one specific goal. What is that goal?

11. State the difference between intrinsic criteria and extrinsic criteria.

12. Can judgmental models be properly characterized as systematic evaluation as that has been defined in Module 13 and characterized in the first reading? Why?

13. What is the most common type of judgmental evaluation using intrinsic criteria? Who conducts that evaluation?

14. List several criteria that an accrediting agency might employ in evaluating a vocational education program.

15. Stake's approach to evaluation emphasizes two main operations of the evaluator. What are those operations?

16. According to Stake, there are three phases of educational programs with which the evaluator must be concerned. List those three phases.

17. What purpose does the rationale statement have in an educational evaluation?

18. Unlike the goal-attainment or accreditation models, the Countenance Model contains an elaboration on the manner in which judgments are made by evaluators in terms of comparisons. List the two types of comparisons Stake delineated, and give an example of each.

19. Does Stake call for the evaluator to pass a personal judgment on a program? If not, who is expected to make the judgment?

20. List several criteria that an evaluator using Stake's model might employ if evaluating a vocational education program.

21. The CSE model is a decision-facilitation evaluation model that has three distinct stages. List those three stages and the two sub-stages of each.

22. Give an example of the type of evaluation that would be provided to decision-makers at each of the six substages of the CSE model.

23. The procedure involved with the CSE model might be considered to have at least 12 steps since each of the three stages has four evaluator activities. What are those four activities?

24. What position does Alkin take regarding the evaluator's making judgments?

25. What are the chief differences between formative and summative evaluation as Alkin defines them?

26. List several criteria that might be used in a decision-facilitation evaluation of vocational education.

Indicate what type of evaluation is characterized in each of the following situations.

27. _____ An evaluation team has been sent to review a Regional Occupational Center. The team visits the center site and spends five days talking to staff and students. The team's questions and observations focus primarily on the plans that have been devised for the center and the equipment and facilities that are available for carrying out these plans.

28. _____ A group of evaluators assigned to evaluate a federally funded career education program feel that the objectives of the program are reproachable but that their mission is to provide information that will enable the program staff to achieve those goals. Because of their conceived mission, the evaluation group never expresses their disapproval of the basic direction of the project.

29. _____ During a series of workshops, a group of printing instructors develops a clear, defensible set of behavioral objectives for their programs in offset printing. After incorporating the objectives into the programs, they want to evaluate the programs in terms of the degree to which those objectives were achieved.

30. _____ An evaluation team assigned by the state department of education to evaluate several controversial but well-funded experimental vocational programs employing the "Cluster Concept" decides to base their evaluation on how many of the students are placed in jobs, where they are placed, and how well they do their jobs after placement.

31. _____ The vocational nursing department of a local community college has developed a number of goals for each course in their program; the department evaluates the success of each course on the basis of measurement data indicating whether or not those goals have been satisfactorily achieved.

32. _____ A nationally known evaluation center has contracted to supply evaluation assistance for a newly funded curriculum development project that is designed to prepare vocational curriculum specialists. The project staff, all curriculum specialists, want the evaluators to gather information that will help them improve the instructional materials they are developing. The evaluation team assembles a variety of data for the project staff, including field tests of instructional materials, student reactions, and the reactions of practicing vocational educators.

Wrapup Activity

NOTE: To meet the basic requirements of this module, select one of the following activities and complete it as directed. If you wish to gain additional credit beyond the basic requirements, you may choose a second activity to complete. Consult with your instructor first if you wish additional credit.

1. Select a high school, community college, or accredited private vocational school near you and ask to examine their latest accreditation report. In a four- to five-page report, detail the criteria that the accreditation agency used to evaluate the program or school, and give an example of a data collection method or technique that was used for each of the criteria.

2. Using the resources found in the References section, research one of the four types of evaluation models. In a four- to five-page paper defend the use of that model, or type of evaluation, as a viable method of vocational education evaluation.

3. Ethics is an issue that is skirted in the evaluation literature. Write a paper detailing the ethical qualities you (and the experts) feel evaluators should have. Some questions to prompt your thinking might be: How much business will an evaluator get in the future if he consistently gives poor evaluations? Should evaluators accept evaluation contracts after programs have already been started? Does a decision-facilitation evaluator have a responsibility to tell decision-makers that the objectives of their program are reprehensible?

4. Research economic or cost-benefit evaluation as a viable type of evaluation for vocational education. Is the cost of conducting such evaluations prohibitive? What if a program costs a lot and students don't find employment, but nevertheless they rate the program as beneficial to them in noneconomic ways? Do you think cost-benefit evaluations might justify large expenditures for vocational education?

(See Appendix A for possible answers.)

Part III:

Group and Classroom Activities

PART III

GROUP AND CLASSROOM ACTIVITIES

Classroom Activities

GLOSSARY

The following terms are defined in order to clarify their meanings in the context of this module.

CIPP. An acronym formed from the first letters of the four basic kinds of evaluation under the decision-facilitation model as advocated by Stufflebeam. The letters represent context, input, process, and product.

COMPARATIVE EVALUATION. Evaluation in which one process or product is compared with another or with others in terms of effectiveness, cost, acceptance, etc.

CRITERION. A standard for judging and validating.

EDUCATIONAL PHENOMENA. Observable objects, facts, events, or processes in the educational setting that are evaluated.

FORMATIVE EVALUATION. Evaluation that is concerned with program improvement, and that generally requires evaluator intervention in the program or process.

OBJECTIVE. A point of accomplishment that can be verified within a given time and under specifiable conditions, which, if attained, reflects progress toward achievement of a corresponding goal. Objectives are sometimes known as behavioral objectives, performance objectives, and terminal objectives.

PRE-TEST and POST-TEST. A component of an evaluation system or research design that requires testing before and after instruction or implementation of a program to determine the extent of student progress or achievement.

RELIABILITY. A term usually applied to measurement instruments, indicating that the instrument is consistent in the way it measures qualities or characteristics.

SUMMATIVE EVALUATION. Evaluation concerned with determining overall program effectiveness; it generally requires little or no evaluator intervention in the program or process.

SYSTEMATIC EVALUATION. A systematic, formal process of identifying and collecting information on educational phenomena to assist decision-makers in choosing among available decision options.

VALIDITY. A term usually applied to measurement instruments, indicating that the instruments adequately cover what they are designed to cover, that they correlate with factors or traits they are designed to measure, and that they correlate with other measures of the same trait.

NOTE: The following activity is designed for use in the classroom to stimulate discussion on specific topics covered in this module. The activity is designed to be used following student self-study; however, depending on the background and abilities of your students, these activities may not require previous study.

1. Divide the class into several groups and allow them to brainstorm possible solutions to the problems presented in the following situation. This same activity should be performed for each of the four evaluation types covered in this module. In other words, the same problems will be "solved" four times, once for each type of evaluation. This will allow the students to compare and contrast the merits and techniques of the various models.

   The Situation. Assume that you are an agency that has contracted to evaluate a federally funded experimental program in vocational education. Fourteen of the fifty high schools in a large urban school district are to implement the program, which is an experiment with the "Cluster Concept" in vocational education, but none of the schools have been selected yet. Schools to be included in the evaluation will be selected by the evaluation agency. The program will be funded for $1 million the first year, $1½ million the second, and $2 million the third. Since the usual 10% of funding is earmarked for evaluation, money is no problem in conducting the evaluation. The operators of the program and the federal sponsors have given the evaluation team free access to the program and the sites, once they are selected.

The Problem. As a class, select one type of evaluation to conduct: (a) goal-attainment, (b) judgmental-intrinsic criteria, (c) judgmental-extrinsic criteria, (d) or decision-facilitation. Then break up into groups and:

a. develop an evaluation plan (stick to the model chosen);
b. select criteria for the evaluation;
c. delineate methods that might be used to collect decision information; and
d. construct a mock evaluation report on the chalkboard or easel (outline it) that includes the results and recommendations of the group; these, of course, should be consistent with the evaluation type.

Activities for Additional Credit

NOTE: These activities are designed for the student who wishes to obtain credit beyond the basic requirements of the module. You may choose to have the student write a paper on one of these activities, or discuss the activity with you, or you may select some other method for the student to complete the activity.

1. Determine what role evaluation plays, or is expected to play, in maintaining quality vocational education programs.

2. Examine the criteria defined by Wenrich and Wenrich (20) and determine which evaluation model they were chosen to serve. (Those criteria are included on pp. 267 to 269 of Suggested References #20.)

3. Collect at least three instruments such as tests, questionnaires, checklists, interview forms, etc., that have been used in evaluations and prepare a content analysis of them. For what types of decisions might they supply information?

4. Many evaluation models stress the importance of assigning students randomly to control or experimental groups. Discuss the problems this might cause a vocational education administrator.

5. IQ tests are being banned from use throughout the United States except in special circumstances. What are the implications of these test bans with respect to the problem of verifying that the abilities of students are equal in two or more groups being evaluated?

6. You have been asked by your district vocational education supervisor to describe, as briefly as possible, the four evaluation models presented in this module. On the basis of the information found in this guide fill in the comparison matrix below, or construct your own matrix.

TYPES OF EVALUATION / ROLE OF JUDGMENT	ATTAINMENT	JUDGMENTAL--INTRINSIC CRITERIA	JUDGMENTAL--EXTRINSIC CRITERIA	DECISION-FACILITATION
DEFINITION				
PURPOSE				
EVALUATOR ROLE				
WEAKNESSES				

Discussion Questions

A. What are some limitations of goal-attainment evaluation in light of the fact that contemporary thought leans toward evaluation for purposes of improvement?

(The value of the goals themselves is not a concern, but only whether they are met or not. Goal-attainment evaluation is after-the-fact.)

B. The last two paragraphs of the Tyler reading selection contain a discussion of the uses of evaluation. How often are those same points brought up in "modern" evaluation theory?

(Tyler's main points were that evaluation is a recurring process involving the formulation of objectives, the classification of their definition, the study of students' reactions, and a continuous effort to interpret students' reactions in order to help improve the education of individual students.

Evaluation was defined as a continuous, cyclical process which would be used for the continued improvement of the program of education. Although the process of evaluation is generally conceptualized much differently today, the general purposes remain the same.)

C. Although accreditation evaluations are generally not "pushed" anymore, what benefits to staff and students might accrue from conducting the type of intensive self-study required by an accreditation evaluation?

(Critical self-analysis might lead to enlightenment and avoid stagnation.)

D. What roles do content specialists play in accreditation evaluations?

(Judges)

E. What is probably the primary reason accreditation-type evaluations have fallen into disfavor?

(The objectivity and empirical basis of the criteria are questionable, and attention paid to the educational process is not balanced by attention to the consequences of the process.)

F. What are some extrinsic criteria that could be used in the evaluation of vocational education programs?

(Placement rate, salaries, need for retraining, happiness, lack of "job jumping.")

G. What qualifications would an educational evaluator have to have in order to justifiably pass judgment on vocational education programs?

(This is a rhetorical question, but someone is going to have to decide sooner or later.)

H. What might some other costs be besides the obvious financial costs?

(Attitudes, morale, loss of other services to society while students are in an education program, excess time needed for the program, etc.)

I. Is it possible for evaluation-related activities to take place at any stage of a program under the CSE Model?

(Yes)

J. Are needs assessment and program planning phases in which evaluators are normally used?

(Most theorists would answer no, but Alkin et al. justify these activities on the basis of their value in facilitating decision-making.)

K. How often are evaluators included in the total curriculum development process? Is it a good idea to include evaluators from the moment the idea for a project or program is conceived? When are evaluators typically brought in on projects or programs? Why?

(Evaluators are not included in the total process very often. Yes, it is a good idea to include them; they may point out potential problems in validation, measurement, etc. Evaluators are typically brought in at the conclusion of the project or program.)

Part IV:

Student Self-Check

PART IV
STUDENT SELF-CHECK

GOAL 14.1

1. List the four major types of educational evaluation, and state the purpose of each type. (14.11)

2. Proponents of each of the four types of evaluation have stated what they believe the evaluator's role should be when conducting that particular type of evaluation. Name one person or agency that advocates each type of evaluation, and state what that person or agency believes the role of the evaluator should be. (14.12)

3. List the operational steps required in conducting each type of educational evaluation. Where more than one "model" exists for a given evaluation type, list the operational steps of the one that you prefer. If a particular model consists of a number of steps repeated during successive stages, list the steps only once, but include all of them. (14.13)

   a. Goal-attainment:
   b. Judgmental-intrinsic:
   c. Judgmental-extrinsic:
   d. Decision-facilitation:

4. For each of the four types of educational evaluation, list several criteria that it would use in evaluating vocational education. (14.14)
   a. Goal-attainment
   b. Judgmental-intrinsic criteria
   c. Judgmental-extrinsic criteria
   d. Decision-facilitation

5. Indicate in the space provided the type of evaluation that is depicted in each of the lettered sections below. (14.15)

a. _____

The career advisors at two inner-city schools feel that their students would profit from exposure to the various occupations found in several large corporations located near the schools. They contact the companies for the purpose of arranging weekly "Orientation-to-Careers" classes on the company sites. The classes are to be conducted by people from the companies who are actually engaged in the occupations that they will demonstrate and talk about.

By being exposed to the various careers (which are largely semi-professional and professional) and the personal and financial rewards that they offer, the career advisors feel that the inner-city students will be sufficiently motivated to finish high school, obtain vocational education, or go on to college.

The career advisors transform their reasons for the program into behavioral objectives and are funded by the district to conduct the program for two years, after which the program will be evaluated on the basis of how many of the students actually finished high school, obtained vocational education, or went on to college. The results of the evaluation will be used to determine whether to continue or discontinue the program.

b. _____

Three years later, after the program in 5 (a) had been dropped for failure to meet the objectives, the same two career advisors, who still felt that the program was a good idea, decided to try it again. After being ridiculed by their peers for even attempting such a ridiculous project the first time, the two career advisors were understandably a little more cautious the second time. They began the project by enlisting the aid of the district vocational education curriculum specialist (who had completed three evaluation modules in her degree program) and developing measurable behavioral objectives for the program. They then arranged to select randomly the students who were to participate in the program, and they expanded the clientele to include a randomly selected group of students from a middle-class suburban high school. They also established two control groups who were not to receive the benefits of the program: one from the inner-city schools and one from the middle-class suburban school. The career advisors and the curriculum specialist turned evaluator then received a tentative three-year funding grant from the district.

5. b. continued

Before beginning instruction, the career advisors, the industry teachers, and a community advisory group decided on the qualities that the students should possess after completion of the program and wrote instructional objectives reflecting those qualities; they also developed course outlines and instructional materials. The materials were field tested during the summer session guidance classes at the schools and modified for use when the program began in the fall.

Once the program began, the evaluator visited the instruction site and periodically tested the students to appraise their progress toward the stated objectives. After the first semester, the evaluator reported her observations to the career advisors, and several changes were made in the succeeding semesters. At the end of two years, the students in the control groups had shown little progress, while those in the instructional program were either working, involved in vocational education programs, or going to college. Because the program was such a success, the two career advisors were promoted to administrative positions in the district headquarters.

c. _____

Baltus Community College, a 2-year college, has had an associate degree program in nursing for ten years. Although the graduates of the program have experienced no difficulty in obtaining nursing licenses, getting transfer credit when they've gone on to the state university to obtain their bachelor's degrees has been next to impossible. The state university (and other schools) claims that it has no way of knowing how good the program at Baltus Community College is. (It doesn't matter that no Baltus graduate has ever failed to obtain a state R.N. license.) Recognizing the plight of their graduates, the administration at Baltus calls in the National League for Nursing, Inc. to validate the quality of their program, facilities, and staff.

d. _____

A group of recent graduates of an educational evaluation program at an unnamed university decide to form their own evaluation consulting firm. Impressed with their own qualifications and range of expertise, the group forms a corporation, and decides to evaluate only vocational programs because three of the five members were once vocational teachers. The group unanimously agrees that vocational programs should receive continued funding only if at least 90% of the graduates are placed in the occupation for which

they were trained. The group further believes that vocational program graduates should be placed at least one or two steps up on the career ladder in the occupation for which they were trained, and that the graduates should be happy on the job and the employers should be happy with the quality of the graduates. If a vocational program can meet the above standards, the group feels that it could be deemed "successful" and be recommended for continued funding.

With their credo established, the new evaluation group sets out to bid on their first evaluation job.

Part V:

Appendices

PART V

APPENDICES

Appendix A:

Possible Study Activity Responses

GOAL 14.1

1. Yes, it is compatible with both.

2. a. Course improvement
   b. Decisions about individuals
   c. Administrative regulation

3. Because the last two were generally local problems, but course improvement, he felt, could be broadly generalized and would be more useful.

4. At the formative stage because the program and the process would still be fluid, or changeable, and the developers would be more receptive to change.

5. An answer that discusses Cronbach's belief that a formal evaluation study should be designed to determine the post-course performance of well-described groups with respect to defined objectives and side effects will be treating the point.

6. He felt they had minimal effect because they were so far removed in time. The results couldn't be used to effect immediate improvement. However, he didn't feel that follow-up studies should be abandoned because they were useful in measuring attitudes, etc.

7. a. Determine effectiveness of the institution
   b. Validate hypotheses upon which the school operates
   c. Provide information for guidance of individual students
   d. Reassure staff, students, and parents that the school is working
   e. Provide a sound basis for public relations
   f. Help clarify the purposes of the school

8. Behavioral objectives

9. The changes in behavior of the students.

10. The development of an instrument or instruments to measure the degree to which the objectives of the school/program were met.

11. Intrinsic criteria are those inherent in the process, such as staff qualifications, facilities, etc. Extrinsic criteria are those concerned with the effects of the process, such as employability, proficiency, etc.

12. No. Information is not compiled for decision-making but for professional judgment purposes only. Improvement considerations do not enter the picture, except in some temporary accreditation situations, and even then, the criteria are still intrinsic in nature, and not generally concerned with the effects of the process.

13. Accreditation. Professional colleagues, or "experts" employed by the accrediting agency.

14. Criteria should include such things as staff qualifications, facilities, equipment, library, etc.

15. a. Description
    b. Judgment

16. a. Antecedent
    b. Transaction
    c. Outcomes

17. It serves as the basis for evaluating the intents of a program.

18. a. Relative--other programs
    b. Absolute--opinions or personal judgment

19. No. Experts make the judgment. The evaluator's role is in processing judgments.

20. The criteria listed by the students should include those external to the program, including, but not limited to placement, job satisfaction, employer satisfaction, expert opinion, personal judgment, etc.

21. a. Pre-formative evaluation
        (1) Needs assessment
        (2) Program planning
    b. Formative evaluation
        (1) Implementation evaluation
        (2) Progress evaluation
    c. Summative evaluation
        (1) Document evaluation
        (2) Outcome evaluation

22. a(1) Perceived importance of relevant goal area, current status, priorities
    a(2) Information about competing programs, planning documents, etc.
    b(1) Information about the extent to which the program has been implemented
    b(2) Extent to which students are progressing toward the goals
    c(1) Extent to which the program was actually implemented
    c(2) Measures of the results or the outcomes obtained by the program

23. a. Ascertaining decision areas
    b. Selecting appropriate information
    c. Collecting and analyzing data
    d. Reporting summary information to decision-makers

24. Alkin feels the judgment role must be discussed and decided upon before data collection. If the information collected provides all the necessary data for judging, then the evaluation as pure information will speak for itself.

25. Formative evaluation is for improvement; it involves evaluator intervention in the planning, implementation, and process of a project.

    Summative evaluation is done to assess the impact of a program; it involves as little evaluator intervention as possible.

26. Criteria listed here might include goal, objectives, expert opinion, test results, costs, social value, etc.

27. Judgmental-intrinsic criteria

28. Decision-facilitation

29. Goal-attainment

30. Judgmental-extrinsic criteria

31. Goal-attainment

32. Decision-facilitation

Appendix B:
Possible Self-Check Responses

GOAL 14.1

1. List the four major types of educational evaluation, and state the purpose of each type. (14.11)

   a. Goal-attainment-purpose: determining if goals were met

   b. Judgmental-intrinsic criteria-purpose: valuing a program based on intrinsic criteria.

   c. Judgmental-extrinsic criteria-purpose: valuing the effects of a program based on extrinsic criteria.

   d. Decision-facilitation purpose: providing a service to decision-makers for program improvement.

2. Proponents of each of the four types of evaluation have stated what they believe the evaluator's role should be when conducting that particular type of evaluation. Name one person or agency that advocates each type of evaluation, and state what that person or agency believes the role of the evaluator should be. (14.12)

a.	Goal-attainment	Ralph Tyler	Appraising goal attainment
		Robert Hammond	Appraising goal attainment
		Metfessel & Michael	Appraisal and recommendation
b.	Judgmental-intrinsic	Various agencies	Observe, check, judge
c.	Judgmental-extrinsic	Michael Scriven	Observe and judge
		Robert Stake	Aid, observe, judge
d.	Decision-facilitation	Malcom Provus	Aid, observe, report, recommend
		D. Stufflebeam	Aid, observe, record, recommend
		Alkin or CSE	Aid, observe, report, recommend

3. List the operational steps required in conducting each type of educational evaluation. Where more than one "model" exists for a given evaluation type, list the operational steps of the one that you prefer. If a particular model consists of a number of steps repeated during successive stages, list the steps only once, but include all of them. (14.13)

a. Goal-attainment:

Tyler-(1) formulate goals, (2) transform goals into behavioral objectives, (3) conduct program, (4) measure students to assess the degree to which objectives were met.

Hammond-(1) isolate aspects to be evaluated, (2) define variables, (3) specify objectives, (4) assess the behavior described in the goals, (5) analyze the results.

Metfessel and Michael-(1) involve members of the total community, (2) construct broad goals and specific objectives, (3) translate objectives into communicable and usable form, (4) develop measurement instruments, (5) conduct periodic measurements, (6) analyze data from measurements, (7) interpret analyzed data, (8) formulate recommendations for change or modificiation.

b. Judgmental-intrinsic

(1) establish standards
(2) conduct self-study (measure performance against standards)
(3) observation by evaluation team (on-site visitation)
(4) judgment by evaluation team and publication of results
(5) periodic reevaluation

c. Judgmental-extrinsic:

Stake-(1) determine antecedents, transactions, and outcomes for each of the two phases, (2) describe and judge. In the description phase, intents are compared with actual observations. In the judgment phase, the evaluator determines standards (relative and absolute), and makes judgments based on them.

Scriven-(1) Initially formulate goals that will be regularly reexamined and modified, (2) develop a pool of test items that are operational versions of the goals, (3) obtain external judgments of the goals and the test item pool, in order to validate consistencies, detect omissions and

discrepancies between implicit and stated goals. (4) A successful match is essential between goals and course content, goals and examination content, and course and examination content. (5) Comparing outcomes for programs versus control groups can include comparisons on dimensions of knowledge, comprehension, attitudes and values, perceptual-motor skills. (6) Other external curriculum effects to examine are those on the teacher, his or her colleagues, other students, administrators, parents, the institution and the taxpayer.

d. Decision-facilitation:

Provus-Five stages to the model, with the same three steps conducted at each stage: (1) define program standards, (2) determine if discrepancies exist between standards and performance, and (3) use discrepancy information to change performance or program standards. These three steps are followed in each of the five stages: design, installation, process, product, and program comparison.

Stufflebeam-(1) delineate information requirements, (2) obtain information to meet those requirements, (3) provide the information to decision-makers. These three steps are followed in the four phases of the CIPP evaluation model: context, input, process and product.

Alkin or CSE-(1) ascertain the decision areas of concern, (2) select appropriate information, (3) collect and analyze data, (4) report summary information to decision-makers. These four steps are followed in the six stages of CSE decision-facilitation evaluation: needs assessment, program planning evaluation, implementation evaluation, progress evaluation, documentation evaluation, and outcome evaluation.

4. For each of the four types of educational evaluation, list several criteria that it would use in evaluating vocational education. (14.14)

a. Goal-attainment
student progress toward objectives; job placement (if that's an objective)

b. Judgmental-intrinsic criteria
years of occupational experience of faculty; quality of tools and equipment; type of instruction (methodology); number and type of books in library relating to vocations; physical facilities; type of programs offered; financial support; etc.

c. Judgmental-extrinsic criteria
effects of the program on learners, both planned and unplanned; the effect of the program on the occupations for which training is offered; the "quality" of the graduates relative to graduates of other programs; how well students learned in the program; relative quality of educational goals; etc.

d. Decision-facilitation
This answer could include nearly any criteria that a decision-maker needed information on in order to improve (or even maintain) an educational program.

5. Indicate in the space provided the type of evaluation that is depicted in each of the lettered sections below. (14.15)

a. Goal-attainment

The career advisors at two inner-city schools feel that their students would profit from exposure to the various occupations found in several large corporations located near the schools. They contact the companies for the purpose of arranging weekly "Orientation-to-Careers" classes on the company sites. The classes are to be conducted by people from the companies who are actually engaged in the occupations that they will demonstrate and talk about.

By being exposed to the various careers (which are largely semi-professional and professional), and the personal and financial rewards these offer, the career advisors feel that the inner-city students will be sufficiently motivated to finish high school, obtain vocational education, or go on to college.

The career advisors transform their reasons for the program into behavioral objectives and are funded by the district to conduct the program for two years, after which the program will be evaluated on the basis of how many of the students actually finished high school, obtained vocational education, or went on to college. The results of the evaluation will be used to determine whether to continue or discontinue the program.

b. Decision-facilitation

Three years later, after the program in 5 (a) has been dropped for failure to meet the objectives, the same two career advisors, who still felt that the program was a good idea, decided to try it again. After being ridiculed by their peers for even attempting such a ridiculous project the

first time, the two career advisors were understandably a little more cautious the second time. They began the project by enlisting the aid of the district vocational education curriculum specialist (who had compelted three evaluation modules in her degree program) and developing measurable behavioral objectives for the program. They than arranged to select randomly the students who were to participate in the program, and they expanded the clientele to include a randomly selected group of students from a middle-class suburban high school. They also established two control groups who were not to receive the benefits of the program: one from the inner-city schools and one from the middle-class suburban school. The career advisors and the curriculum specialist turned evaluator then received a tentative three-year funding grant from the district.

Before beginning instruction, the career advisors, the industry teachers, and a community advisory group decided on the qualities that the students should possess after completion of the program and wrote instructional objectives reflecting those qualities; they also developed course outlines and instructional materials. The materials were field tested during the summer session guidance classes at the schools and modified for use when the program began in the fall.

Once the program began, the evaluator visited the instruction site and periodically tested the students to appraise their progress toward the stated objectives. After the first semester, the evaluator reported her observations to the career advisors, and several changes were made in the succeeding semesters. At the end of two years, the students in the control groups had shown little progess, while those in the instructional program were either working, involved in vocational education programs, or going to college. Because the program was such a success, the two career advisors were promoted to administrative positions in the district headquarters.

c. Judgmental-intrinsic criteria

Baltus Community College, a 2-year college, has had an associate degree program in nursing for ten years. Although the graduates of the program have experienced no difficulty in obtaining nursing licenses, getting transfer credit when they've gone on to the state university to obtain their bachelor's degrees has been next to impossible. The state university (and other schools) claims that it has no way of knowing how good the program at Baltus Community College is. (It doesn't matter that no Baltus graduate has ever failed to obtain a state R.N. license.) Recognizing the plight of their graduates, the administration at Baltus calls in the National League for Nursing, Inc. to validate the quality of their program, facilities, and staff.

d. Judgmental-extrinsic criteria

A group of recent graduates of an educational evaluation program at an unnamed university decide to form their own evaluation consulting firm. Impressed with their own qualifications and range of expertise, the group forms a corporation, and decides to evaluate only vocational programs because three of the five members were once vocational teachers. The group unanimously agrees that vocational programs should receive continued funding only if at least 90% of the graduates are placed in the occupation for which they were trained. The group further believes that vocational program graduates should be placed at least one or two steps up on the career ladder in the occupation for which they were trained, and that the graduates should be happy on the job and the employers should be happy with the quality of the graduates. If a vocational program can meet the above standards, the group feels that it could be deemed "successful" and be recommended for continued funding.

With their credo established, the new evaluation group sets out to bid on their first evaluation job.

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